What I claim as new and desire to secure by Letters Patent of the United States is:

1. A fiber reinforced pipe length formed of a solid thermoplastic organic polymer member with inner and outer surfaces having a plurality of continuous juxtapositioned reinforcement fibers formed with a solid material composition selected from the group consisting of ceramics, metals, carbon and organic polymers which are thermally bonded to the outer surface of said pipe length in a predetermined spatial direction with respect thereto, said reinforcement fibers having been continuously wrapped about the outer surface of said pipe length in an unbonded condition while said pipe length is continuously moving in a linear direction with respect thereto and followed by sufficient heating of the fiber wrapped pipe length to cause thermal bonding therebetween while the pipe length continues movement in the same linear direction.

2. The fiber reinforced pipe length of claim 1 having multiple wraps of the reinforcement fibers.

3. The fiber reinforced pipe length of claim 1 wherein the reinforcement fibers are wrapped in the hoop direction.

4. The fiber reinforced pipe length of claim 1 wherein the reinforcement fibers are wrapped at an angle with respect to the longitudinal axis of the pipe length.

5. The fiber reinforced pipe length of claim 1 wherein the pipe length has a cylindrical configuration.

6. The fiber reinforced pipe length of claim 2 wherein the individual fiber wraps are aligned in different spatial directions.

7. A plurality of identical fiber reinforced pipe lengths joined together at the ends and each formed of the same solid thermoplastic organic polymer with inner and outer surfaces, said joined pipe lengths having a plurality of continuous juxtapositioned reinforcement fibers formed with a solid material composition selected from the group consisting of ceramics, metals, carbon and organic polymers which are thermally bonded to the outer surface of each joined pipe length in a predetermined spatial direction with respect thereto, said reinforcement fibers having been continuously wrapped about the outer surface of said joined pipe lengths in an unbonded condition while said joined pipe lengths are continuously moving together in a linear direction with respect thereto and followed by sufficient heating of the fiber wrapped joined pipe lengths to cause thermal bonding

therebetween while the joined pipe lengths continue movement in the same linear direction.

8. The fiber reinforced pipe lengths of claim 7 having multiple wraps of the reinforcement fibers.

9. The fiber reinforced pipe lengths of claim 8 wherein the individual fiber wraps are aligned in different spatial directions

10. The fiber reinforced pipe lengths of claim 7 wherein the reinforcement fibers are wrapped at an angle with respect to the longitudinal axis of the joined pipe lengths.

11. A method for reinforcement of a pipe length with inner and outer surfaces and formed with a solid thermoplastic organic polymer which comprises:

(a) continuously moving the pipe length in a linear direction,

(b) wrapping a plurality of continuous juxtapositioned reinforcement fibers formed with a solid material composition selected from the group consisting of ceramics, metals, carbon and organic polymers while in an unbonded condition about the outer surface of said moving pipe length in a predetermined spatial direction, and

(c) heating the fiber wrapped pipe length sufficiently to cause thermal bonding between the

reinforcement fibers and the pipe length while said pipe length continues to move in the same linear direction.

12. The method of claim 11 wherein the thermal bonding includes radial expansion of the moving pipe length.

13. The method of claim 11 wherein the thermal bonding includes melting of the pipe outer surface.

14. The method of claim 11 wherein the reinforcement fibers are provided in a matrix formed with a solid thermoplastic organic polymer.

15. The method of claim 14 wherein the thermal bonding includes melting of the fiber matrix.

16. The method of claim 11 wherein the thermal bonding includes radial expansion of the moving pipe length and melting of the pipe outer surface.

17. The method of claim 14 wherein the thermal bonding includes radial expansion of the moving pipe length while being accompanied by melting of the outer pipe surface as well as melting of the reinforcement fiber matrix.

18. A method for reinforcement of a plurality of identical pipe lengths joined together at the ends and each formed of the same solid thermoplastic polymer with inner and outer surfaces which comprise:

(a) continuously moving the joined pipe lengths in a linear direction,

(b) wrapping a plurality of continuous juxtapositioned reinforcement fibers formed with a solid material composition selected from the group consisting of ceramics, metals, carbon and organic polymers while in an unbonded condition about the outer surface of each moving joined pipe length in a predetermined spatial direction, and

(c) heating the fiber wrapped pipe lengths sufficiently to cause thermal bonding between the reinforcement fibers and the pipe lengths while said joined pipe lengths continue to move in the same linear direction.

19. The method of claim 18 wherein the thermal bonding includes radial expansion of the moving pipe lengths.

20. The method of claim 18 wherein the thermal bonding includes melting of the pipe outer surfaces.

21. The method of claim 18 wherein the reinforcement fibers are provided in a matrix formed with a solid thermoplastic organic polymer.

22. The method of claim 21 wherein the thermal bonding includes melting of the fiber matrix.

23. The method of claim 18 wherein the thermal bonding includes radial expansion of the moving pipe lengths and melting of the outer pipe surfaces.

24. The method of claim 21 wherein the thermal bonding includes radial expansion of the moving pipe lengths while being accompanied by melting of the outer pipe surfaces as well as melting of the reinforcement fiber matrix.

25. An apparatus for reinforcement of a pipe length with inner and outer surfaces and formed with a solid thermoplastic organic polymer which includes:

(a) pipe feeding means which continuously transports the pipe length in a linear travel direction for operative association with rotating fiber supply means,

(b) fiber supply means which rotate about the circumference of said moving pipe length to continuously apply a plurality of juxtapositioned reinforcement fiber wraps in a predetermined spatial direction on the outer surface of said moving pipe length, and

(c) heating means which causes thermal bonding to be continuously formed between the applied reinforcement fiber wraps and the outer surface of the moving pipe length.

26. The apparatus of claim 25 which includes a plurality of the fiber supply means.

27. The apparatus of claim 25 which includes mechanical cut-off means operatively associated with the fiber supply means to terminate reinforcement fiber application.

28. The apparatus of claim 25 wherein the fiber supply means comprises a cylindrical winder mechanism operatively associated with a rotary fiber spool.

29. The apparatus of claim 28 wherein the fiber spool provides the juxtapositioned reinforcement fibers in a matrix formed with a solid thermoplastic organic polymer.

30. The apparatus of claim 25 wherein the pipe feeding means provides continuous linear motion at a constant velocity.

31. The apparatus of claim 30 wherein the pipe feeding means is carried out with a moving belt drive mechanism.

32. The apparatus of claim 26 wherein the individual fiber wraps are aligned in different spatial directions.

33. The apparatus of claim 25 wherein the heating means employs a cylindrical heater surrounding the fiber wrapped pipe length.

34. The apparatus of claim 25 wherein the pipe feeding means continuously supplies a plurality of discrete pipe lengths joined together at the ends.